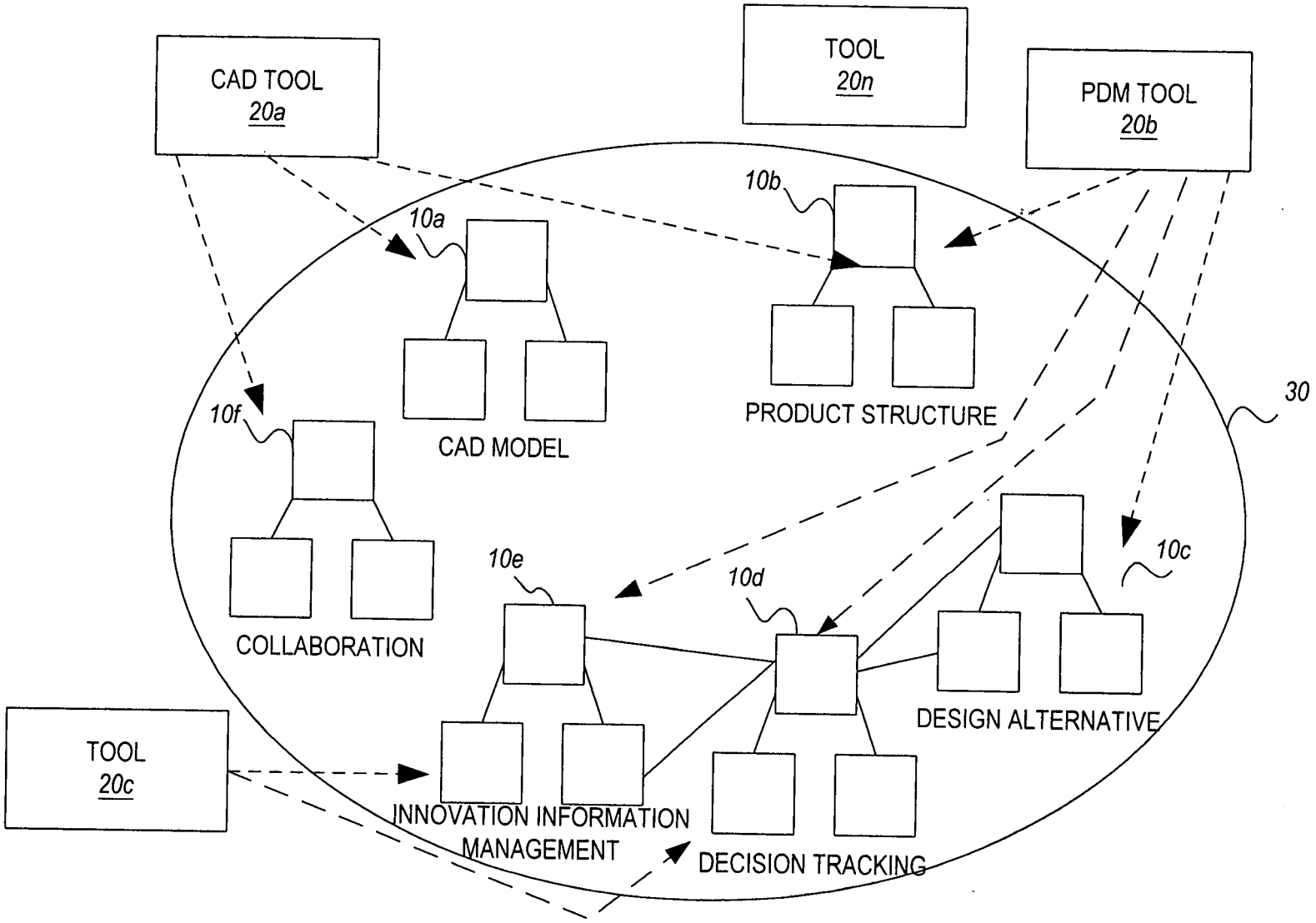
CAD TOOL
20a
TOOL
20n
PDM TOOL
20b
10b
10a
10f
CAD MODEL
PRODUCT STRUCTURE
30
COLLABORATION
10e
10d
10c
DESIGN ALTERNATIVE
TOOL
20c
INNOVATION INFORMATION
MANAGEMENT
DECISION TRACKING

FIG. 1

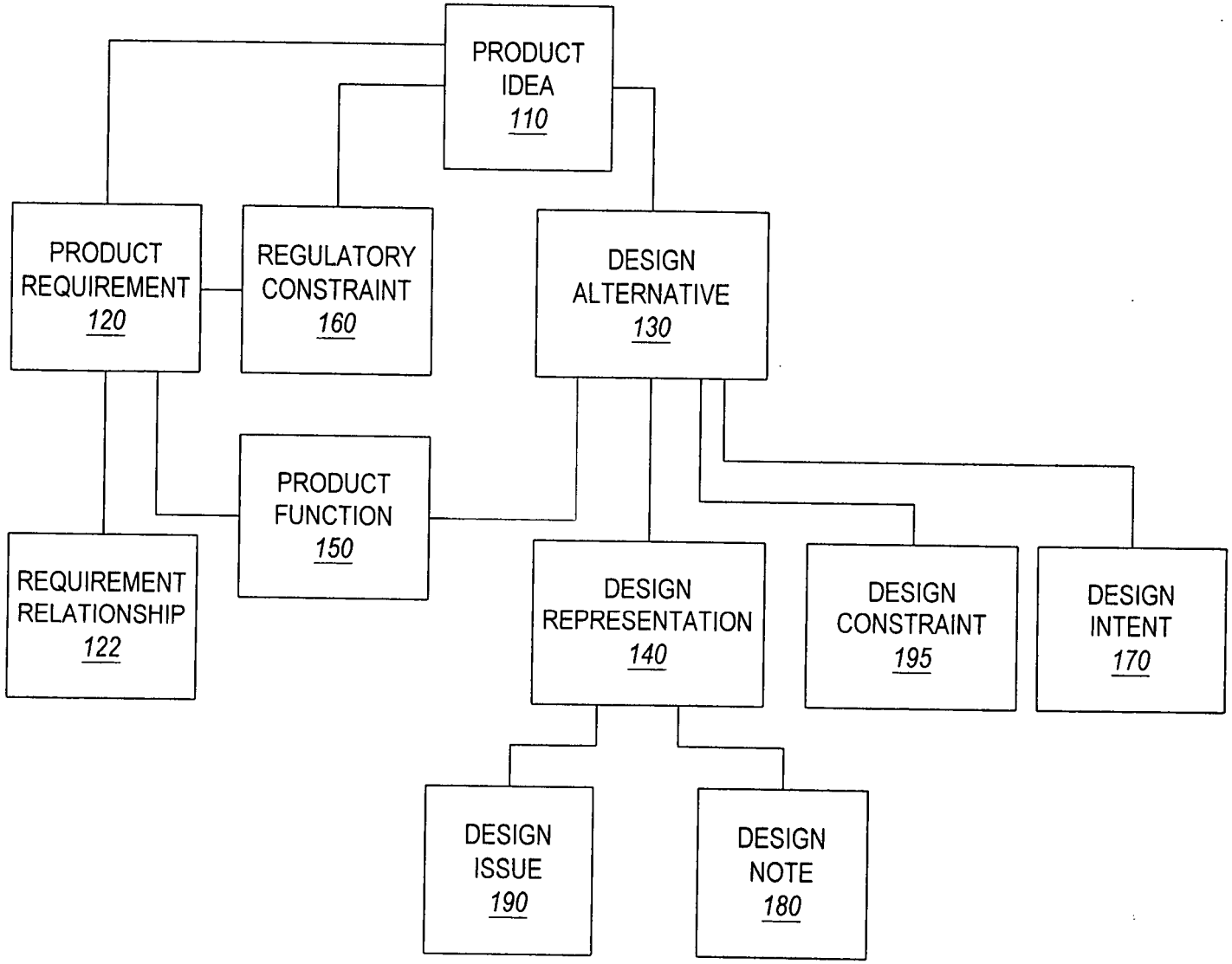
PRODUCT IDEA 110
PRODUCT REQUIREMENT 120
REGULATORY CONSTRAINT 160
DESIGN ALTERNATIVE 130
PRODUCT FUNCTION 150
REQUIREMENT RELATIONSHIP 122
DESIGN REPRESENTATION 140
DESIGN CONSTRAINT 195
DESIGN INTENT 170
DESIGN ISSUE 190
DESIGN NOTE 180

FIG. 2

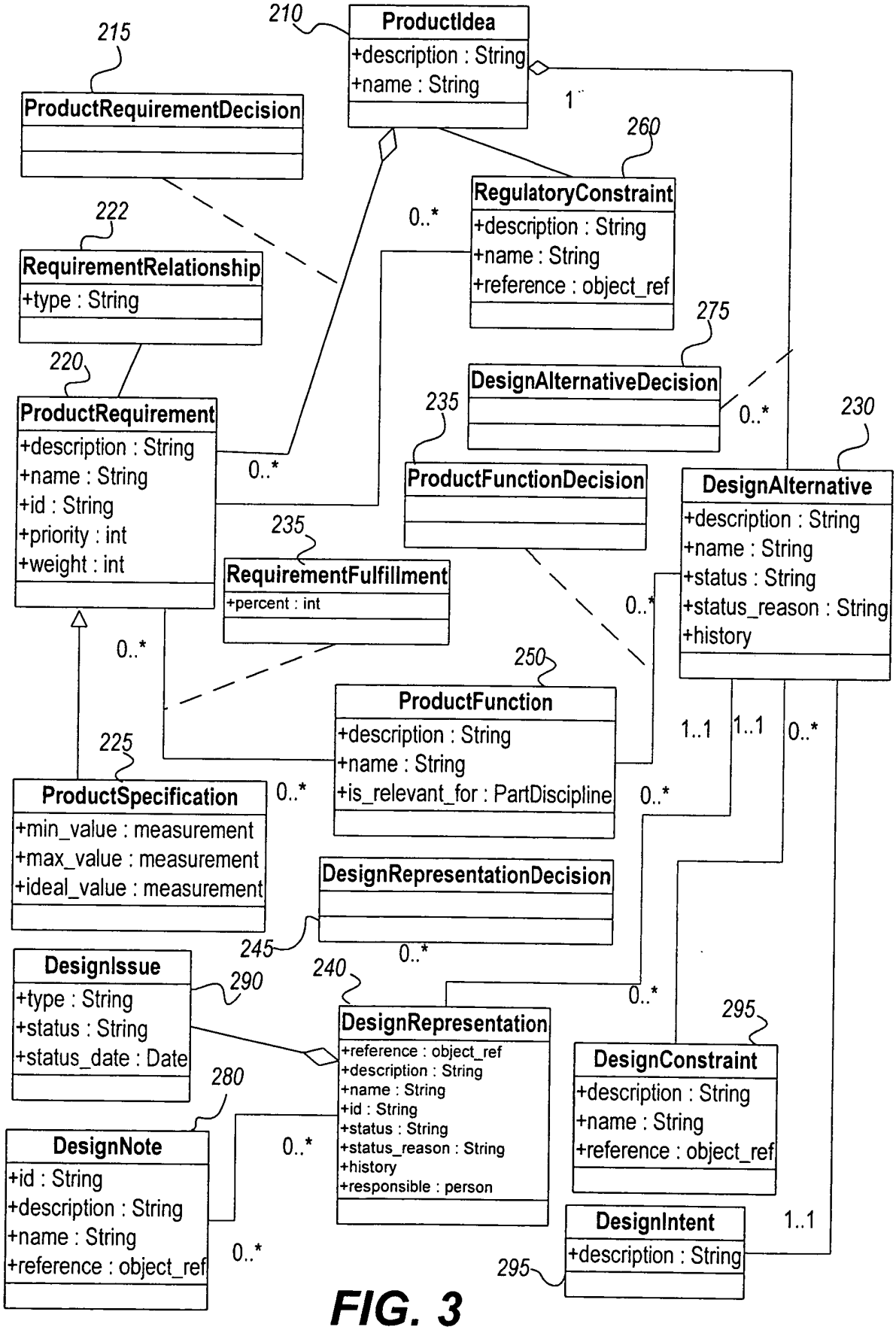
ProductIdea
+description : String
+name : String
210
1
ProductRequirementDecision
215
RegulatoryConstraint
+description : String
+name : String
+reference : object_ref
260
0..*
RequirementRelationship
+type : String
222
ProductRequirement
+description : String
+name : String
+id : String
+priority : int
+weight : int
220
0..*
DesignAlternativeDecision
275
235
0..*
230
ProductFunctionDecision
DesignAlternative
+description : String
+name : String
+status : String
+status_reason : String
+history
RequirementFulfillment
+percent : int
235
0..*
0..*
250
ProductFunction
+description : String
+name : String
+is_relevant_for : PartDiscipline
1..1
1..1
0..*
225
ProductSpecification
+min_value : measurement
+max_value : measurement
+ideal_value : measurement
0..*
0..*
DesignRepresentationDecision
245
0..*
DesignIssue
+type : String
+status : String
+status_date : Date
290
240
0..*
295
DesignRepresentation
+reference : object_ref
+description : String
+name : String
+id : String
+status : String
+status_reason : String
+history
+responsible : person
DesignConstraint
+description : String
+name : String
+reference : object_ref
280
DesignNote
+id : String
+description : String
+name : String
+reference : object_ref
0..*
0..*
DesignIntent
+description : String
1..1
295

FIG. 3

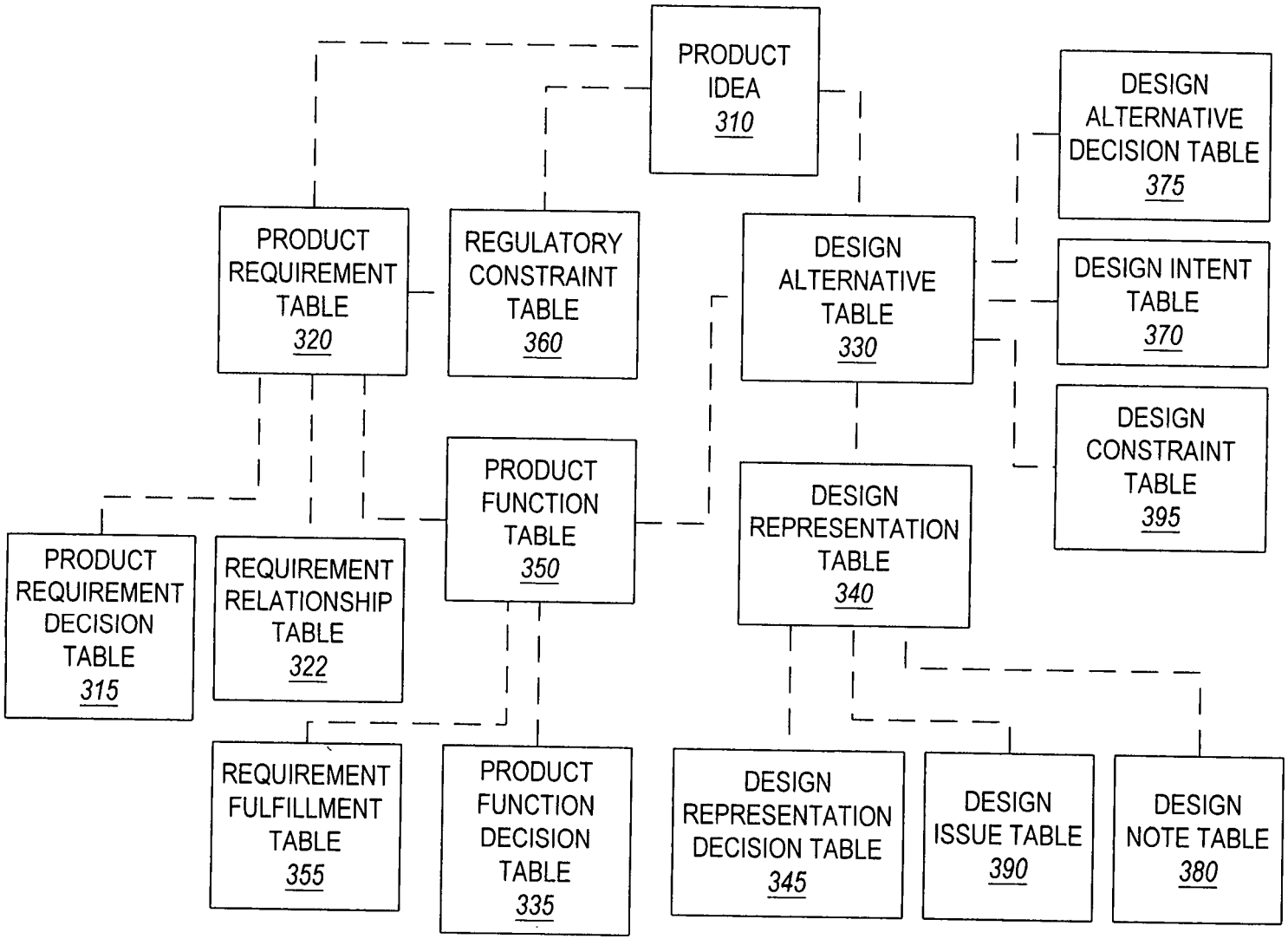
PRODUCT IDEA 310
DESIGN ALTERNATIVE DECISION TABLE 375
PRODUCT REQUIREMENT TABLE 320
REGULATORY CONSTRAINT TABLE 360
DESIGN ALTERNATIVE TABLE 330
DESIGN INTENT TABLE 370
DESIGN CONSTRAINT TABLE 395
PRODUCT FUNCTION TABLE 350
DESIGN REPRESENTATION TABLE 340
PRODUCT REQUIREMENT DECISION TABLE 315
REQUIREMENT RELATIONSHIP TABLE 322
REQUIREMENT FULFILLMENT TABLE 355
PRODUCT FUNCTION DECISION TABLE 335
DESIGN REPRESENTATION DECISION TABLE 345
DESIGN ISSUE TABLE 390
DESIGN NOTE TABLE 380

FIG. 4

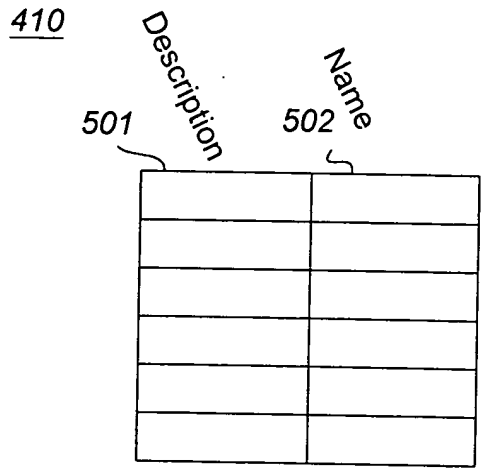

FIG. 5

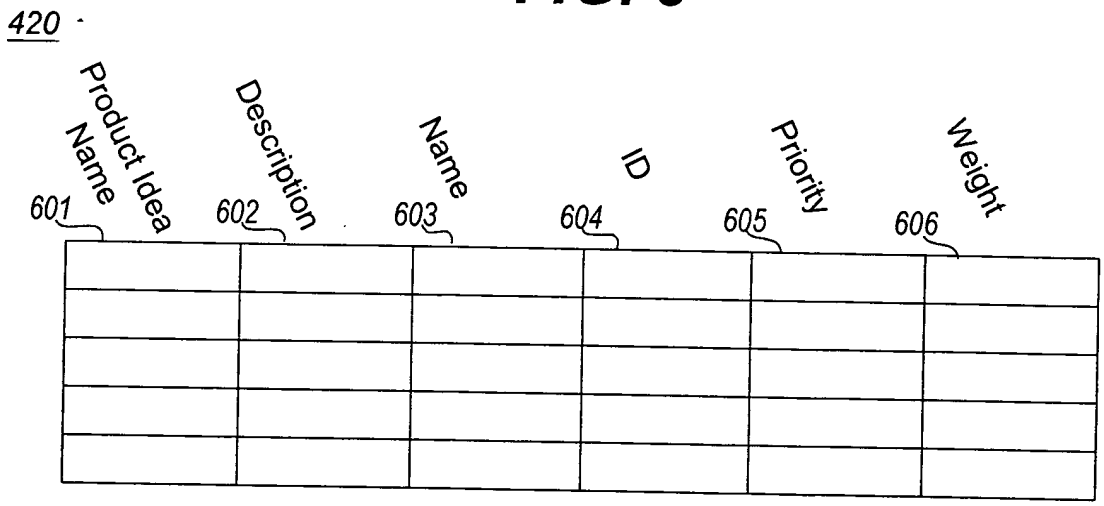

FIG. 6

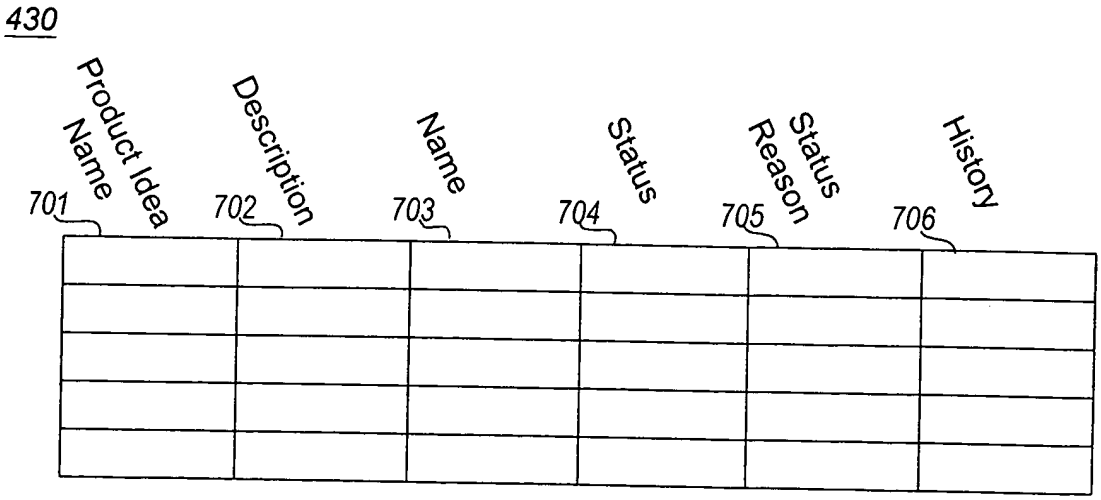

FIG. 7

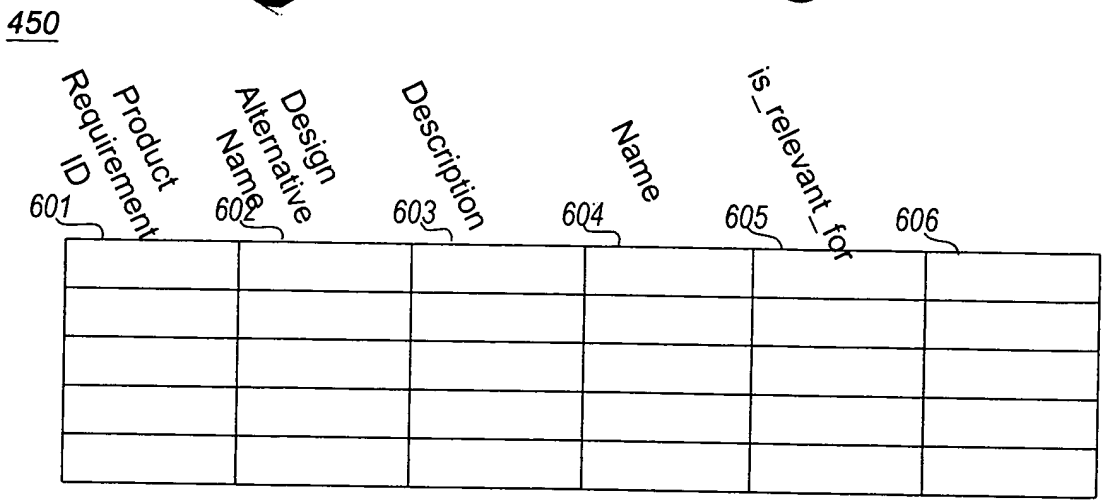
450
Product Requirement ID
601
Design Alternative Name
602
Description
603
Name
604
is_relevant_for
605
606

FIG. 8

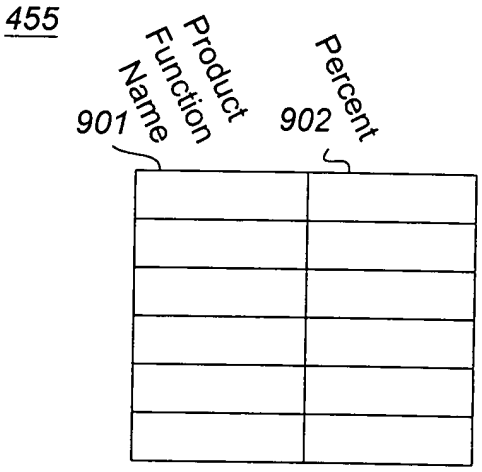
455
Product Function Name
901
Percent
902

FIG. 9

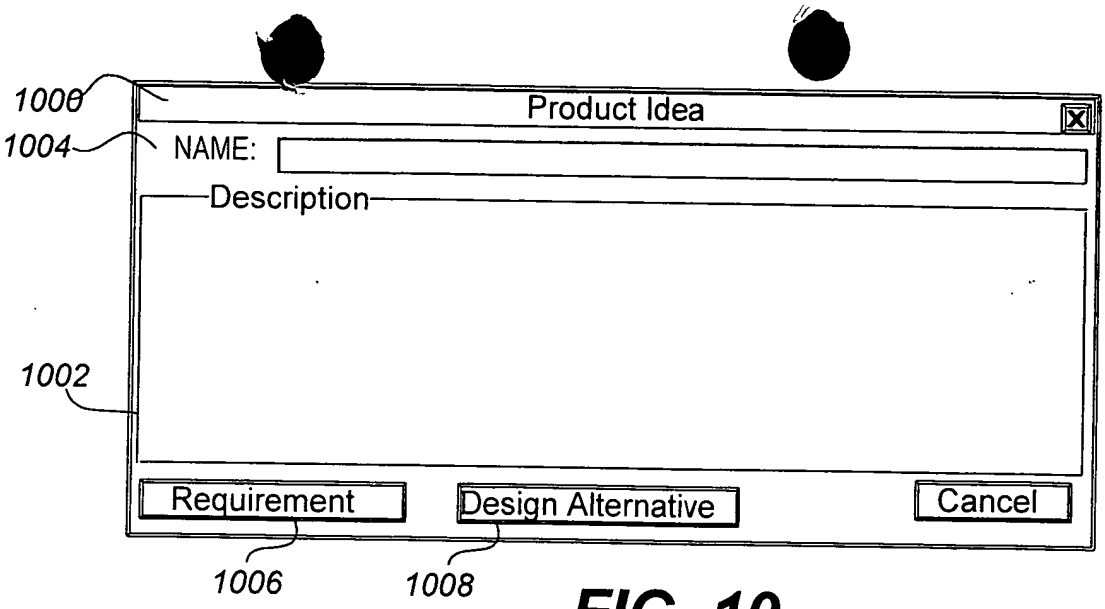

FIG. 10

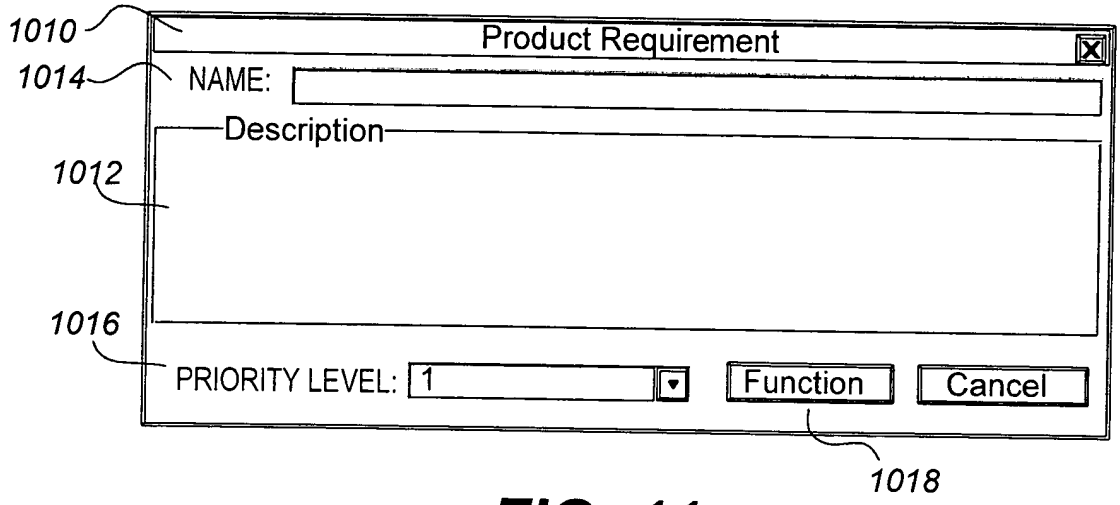

FIG. 11

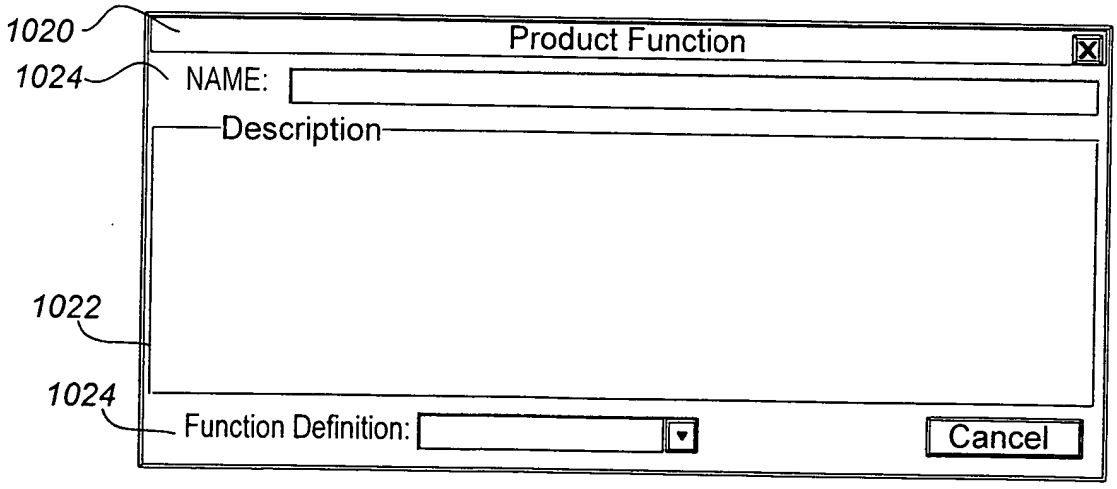

FIG. 12

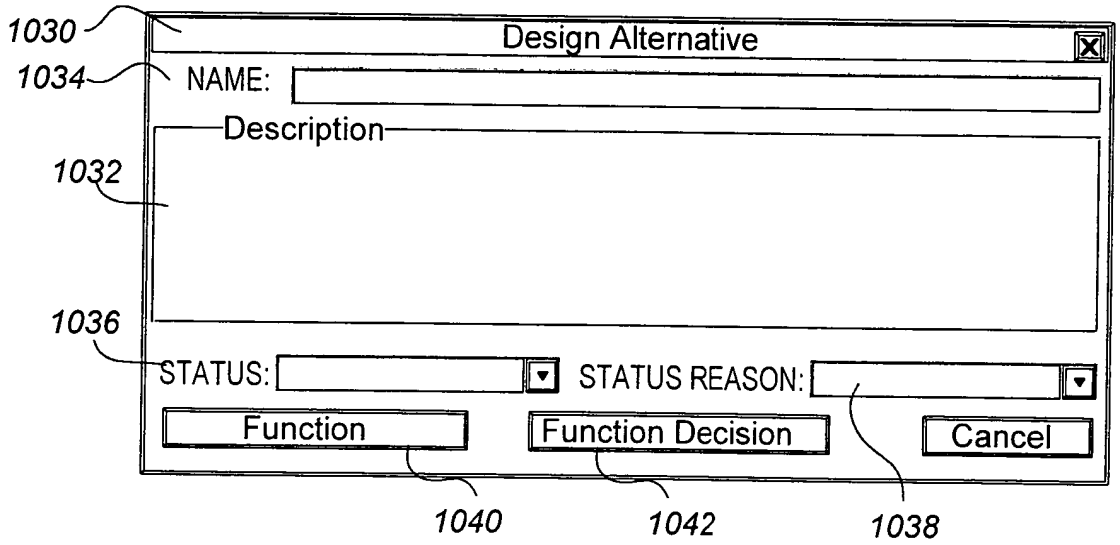
1030
Design Alternative
1034
NAME:
Description
1032
1036
STATUS:
STATUS REASON:
Function
Function Decision
Cancel
1040
1042
1038

FIG. 13